

INTERNATIONAL SEARCH REPORT

Int. Application No
PCT/EP2004/008470

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 C12P13/08 C12N15/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C12P C12N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, BIOSIS, EMBASE, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2002/055151 A1 (RIEPING MECHTHILD ET AL) 9 May 2002 (2002-05-09) the whole document	1-34, 36-39
Y	NAGANO T ET AL: "HIGH EXPRESSION OF THE SECOND LYSINE DECARBOXYLASE GENE, IDC, IN ESCHERICHIA COLI WC196 DUE TO THE RECOGNITION OF THE STOP CODON (TAG), AT A POSITION WHICH CORRESPONDS TO THE 33TH AMINO ACID RESIDUE OF PHI38, AS A SERINE RESIDUE BY THE AMBER SUPPRESSOR," BIOSCIENCE BIOTECHNOLOGY BIOCHEMISTRY, JAPAN SOC. FOR BIOSCIENCE, BIOTECHNOLOGY AND AGROCHEM. TOKYO, JP, vol. 64, no. 9, 2000, pages 2012-2017, XP009012266 ISSN: 0916-8451 the whole document	15, 36-39

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *Z* document member of the same patent family

Date of the actual completion of the international search

15 February 2005

Date of mailing of the international search report

01.03.05

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Rojo Romeo, E

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	SHIIO I ET AL: "MICROBIAL PRODUCTION OF L-THREONINE PART I. PRODUCTION BY ESCHERICHIA COLI MUTANT RESISTANT TO ALPHA-AMINO-BETA-HYDROXYVALERIC ACID" AGRICULTURAL AND BIOLOGICAL CHEMISTRY, JAPAN SOCIETY FOR BIOSCIENCE, BIOTECHNOLOGY AND AGROCHEMISTRY,, JP, vol. 33, no. 8, 1969, pages 1152-1160, XP001131907 ISSN: 0002-1369 cited in the application the whole document -----	14, 36-39
Y	US 4 278 765 A (DEBABOV VLADIMIR G ET AL) 14 July 1981 (1981-07-14) cited in the application the whole document -----	14, 36-39
P,Y	WO 03/074719 A (DEGUSSA) 12 September 2003 (2003-09-12) the whole document -----	1-34, 36-39
X	SMITH H W ET AL: "TRANSMISSIBLE SUBSTRATE-UTILIZING ABILITY IN ENTEROBACTERIA" JOURNAL OF GENERAL MICROBIOLOGY, SOCIETY FOR MICROBIOLOGY, READING, GB, vol. 87, no. 1, 1975, pages 129-140, XP001024294 ISSN: 0022-1287 cited in the application the whole document -----	35

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Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☒ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.

2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-34 and 36-39

a process for the preparation of L-threonine using L-threonine-producing bacteria from the family Enterobacteriaceae, as claimed in claim 1 and embodiments thereof.

2. claim: 35

Saccharose-utilizing transconjugants of Escherichia coli K-12 deposited as DSM 16293 at the German Collection of Microorganisms and Cell Cultures (Braunschweig, Germany)

INTERNATIONAL SEARCH REPORT

Information on patent family members

In International Application No

PCT/EP2004/008470

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2002055151 A1	09-05-2002	DE 10103778 A1 US 2003190712 A1 AU 2054202 A WO 0218543 A2 EP 1313838 A2 MX PA03000585 A ZA 200301636 A	14-03-2002 09-10-2003 13-03-2002 07-03-2002 28-05-2003 06-06-2003 03-02-2004
US 4278765 A	14-07-1981	SU 875663 A1 HU 190999 B	15-09-1982 28-12-1986
WO 03074719 A	12-09-2003	DE 10244581 A1 AU 2003215611 A1 CA 2478266 A1 WO 03074719 A2 EP 1481075 A2 US 2004082040 A1	18-09-2003 16-09-2003 12-09-2003 12-09-2003 01-12-2004 29-04-2004